We claim:

1. A method of producing mammalian reovirus, comprising the steps of:
   (a) contacting human embryo kidney 293 (HEK 293) cells with a mammalian reovirus under conditions which result in reoviral infection of said HEK 293 cells;
   (b) incubating the culture of said infected cells for a period of time sufficient to allow for viral replication; and
   (c) harvesting the virus produced.

2. The method of claim 1 wherein the mammalian reovirus is a human reovirus.

3. The method of claim 2 wherein the human reovirus is a serotype 3 reovirus.

4. The method of claim 3 wherein the serotype 3 reovirus is the Dearing strain.

5. The method of claim 1 wherein the multiplicity of infection in step (a) is 10 or less.

6. The method of claim 5 wherein the multiplicity of infection is 5 or less.

7. The method of claim 6 wherein the multiplicity of infection is 1 or less.

8. The method of claim 7 wherein the multiplicity of infection is 0.5.

9. The method of claim 8 wherein the multiplicity of infection is 0.1.

10. The method of claim 1 wherein the virus is harvested when at least 5% of the cells in the culture remain viable.

11. The method of claim 1 wherein the virus is harvested when 20-95% of the cells in the culture remain viable.

12. The method of claim 11 wherein the virus is harvested when 35-90% of the cells in the culture remain viable.

13. The method of claim 12 wherein the virus is harvested when 50-80% of the cells in the culture remain viable.

14. The method of claim 1 wherein the HEK 293 cells are cultured as adherent cells.

15. The method of claim 1 wherein the HEK 293 cells are cultured as a suspension.

16. The method of claim 1 wherein the virus is harvested by separating the cells from the culture media, disrupting the cells to release the virus from the cells, and purifying the virus.

17. The method of claim 16 wherein the cells are separated from the culture media by centrifugation and disrupted by freeze-thawing, and the virus is purified by a CsCl gradient.

18. The method of claim 1, further comprising the step of freezing the harvested virus for storage.

19. The method of claim 18 wherein the harvested virus is stored at -60°C or below.

20. The method of claim 1 further comprising the step of lyophilizing the harvested virus for storage.

21. A method of producing infectious reovirus comprising the steps of:

(a) culturing 293 cells in a culture medium containing 293 Serum Free Medium supplemented with 4 mM L-glutamine at 36°C ± 2 °C, 6% ± 2% CO_2 and 80% ± 5% relative humidity in spinner flasks at an impeller speed of 35-40 rpm until the cells reach a cell density of about 10^6 cells/ml;

(b) infecting the cells with the Dearing strain reovirus at a multiplicity of infection of 0.5;

(c) incubating the culture of said infected cells in the same conditions as in step (a) until the percentage of viable cells drops to 50-80%;

(d) harvesting the virus produced by centrifugation of the culture, freezing-thawing to release the virus from the cells, and purifying the virus by a CsCl gradient; and

(e) storing the virus at -60°C or below.

22. A mammalian reovirus composition comprising reovirus prepared by the method of claim 1.

23. The composition of claim 22 wherein the reovirus is a human reovirus.

24. The composition of claim 22 wherein the reovirus is a serotype 3 reovirus.

25. The composition of claim 22 wherein the reovirus is the Dearing strain.

26. The composition of claim 22 further comprising a pharmaceutically acceptable carrier or excipient.